

## **2.0 DESCRIPTION OF PROPOSED PROJECT**

The Project Description section addresses the project background, the proposed Project, the current operations, maintenance, and safety controls, the Applicant's environmental commitments, the project schedule, inspection and mitigation monitoring, and future plans and abandonment issues.

Each of these is discussed below.

### **2.1 PROJECT BACKGROUND**

#### **2.1.1 Ellwood Marine Terminal History**

The Ellwood Marine Terminal (EMT) was constructed in 1929 by Burmah Oil Development Inc. (Phillips Petroleum Company) and has been operated as a barge and tanker transfer facility for crude oil and petroleum products since then. Originally, production from the onshore and nearshore wells, located in Bankline Oil Company's Ellwood Field, was transported from the EMT. Since the 1960s, production from the South Ellwood Field and Platform Holly has been transported from the EMT.

#### **2.1.2 Onshore Area**

In August 1929, the Bankline Oil Company leased the land on which the onshore improvements associated with the EMT are located. This onshore land is located adjacent to the Pacific Ocean, 0.75 mile (1.2 kilometers [km]) northwest of Coal Oil Point in Santa Barbara County, California, approximately one mile (1.6 km) west of the intersection of Storke and El Colegio Roads, as shown in Figure 2-1. The current owner of the onshore land is the University of California, Santa Barbara (UCSB). In 1997, Venoco acquired the tenant's right under the lease with respect to the onshore land. The current lease with UCSB will expire in 2016.

#### **2.1.3 Offshore CSLC Lease Boundary and Regulatory Boundary Areas**

The offshore portion of the EMT leased to Venoco pursuant to the State lease (Lease PRC 3904.1) is shown on Figure 2-2. The lease area covers a block of land extending offshore some 2,600 feet (792 meters [m]) near the city of Goleta, and consists of 2.9 acres (1.2 hectares) of State sovereign land that is used as an offshore transfer facility for crude oil. The offshore portion of the EMT is located in that block and consists of an irregular six-point mooring.

**Figure 2-1  
Project Location**



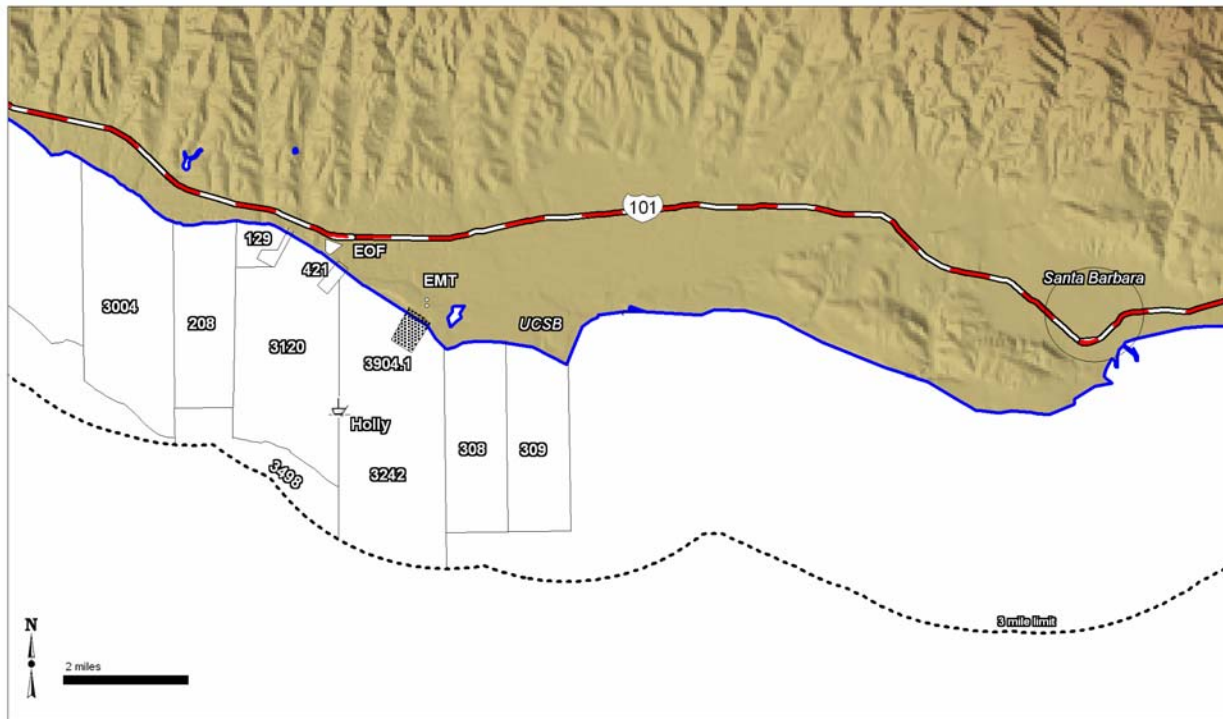
system in approximately 60 feet (18 m) of water, with associated pipeline and subsea hoses. The California State Land Commission's (CSLC) leasing jurisdiction over the EMT extends to the ordinary high water mark. The CSLC's regulatory jurisdiction extends from the first valve outside the containment areas surrounding the two onshore tanks (as per agreement with California State Fire Marshall, dated April 30, 2003) to the Pipeline End Manifold. The two tanks are integral components of terminal operations.

## **2.2 PROPOSED PROJECT**

### **2.2.1 Project Action**

Venoco is a privately held, independent oil and gas company that is seeking approval from the CSLC of a new State lease for an additional 10 years (through February 28, 2013). This would allow Venoco to continue operating the EMT, a crude-oil marine loading terminal and associated storage facility, with the potential to increase oil throughput and transportation from the current levels to the permitted levels.

**Figure 2-2  
Area Leases**



The CSLC first entered into a State lease (Lease PRC 3904.1), with respect to existing offshore pipelines and other improvements associated with the EMT (offshore Improvements), with Signal Oil and Gas Company beginning February 28, 1968, for a period of 15 years, with the option to renew the lease for three additional periods of 10 years each. That lease was subsequently terminated, and the current State lease was executed with Aminoil, Inc., for a 10-year period beginning March 1, 1983, with two renewal options of 10 years each. The lease was then assigned to various entities and, on July 11, 1997, the CSLC approved the assignment of the State lease to Venoco. Since March 1993, the CSLC has been granting one-year extensions of the lease. Venoco has notified the CSLC that it wishes to exercise its last 10-year lease renewal option, as provided in the State lease, to extend the State lease through February 28, 2013. The CSLC lease, if authorized, will expire in 2013, and Venoco must cease operations or apply for a new lease at that time. By 2016, the UCSB lease will expire, and the onshore portion of the EMT must be abandoned and returned to its original condition or a new lease negotiated with UCSB. As defined in section 15378(a)(3) of the State California Environmental Quality Act (CEQA) Guidelines, the proposed Project is the continued operation of the EMT facilities under a new 10-year State lease.

1 The proposed Project does not include construction of any new facilities or  
2 modifications to any existing facility; however, it includes the potential for increasing  
3 crude oil throughput and transportation to the permitted levels.

#### 4 **2.3 Current Operations of the Project Facilities**

5 The EMT handles all of the oil production from the South Ellwood Field. Oil is  
6 transported from Platform Holly, in State waters, through a subsea pipeline to the  
7 Ellwood Onshore Facility (EOF) for processing. The EOF is located approximately two  
8 miles (3.2 km) west of the EMT. Once the oil is processed, Venoco sends it to the EMT  
9 through the common carrier ExxonMobil Pacific Line 96 (Line 96).

10 At the EMT, oil is stored in Tanks 8264 and 8265. From the storage tanks, oil is  
11 pumped into a pipeline, known as the EMT Loading Line, to an offshore marine loading  
12 connection for loading into the barge Jovalan. The barge Jovalan is the only barge  
13 permitted to transport oil from the EMT. The barge Jovalan delivers the oil to Venoco's  
14 market facilities in the Los Angeles and San Francisco Bay areas.

15 The following discussion details current operations of the South Ellwood Field facilities.  
16 While the focus of this Environmental Impact Report (EIR) is on the EMT facilities and  
17 the barge Jovalan, descriptions of all the field facilities are included to provide context.  
18 These facilities include the following:

- 19 • Ellwood Pier;
- 20 • Platform Holly and its associated pipelines;
- 21 • Beachfront Lease (PRC 421) and its associated facilities;
- 22 • Ellwood Onshore Facility;
- 23 • Line 96 from the Ellwood Onshore Facility to the Ellwood Marine Terminal;
- 24 • Ellwood Marine Terminal and its associated facilities; and
- 25 • Barge Jovalan.

### 2.3.1 Ellwood Pier

The Ellwood Pier is located west of the Ellwood Oil and Gas Processing Facility (see Figure 2-1). It was rebuilt in 1980 and is approximately 900 feet (274 m) long. The pier is used to transport personnel, supplies, and equipment via crew boats and supply boats to platforms in the Central Sub-region, from the northern boundary of Carpinteria to the Santa Ynez River, and includes platforms off Point Arguello, and Platforms Holly, Hondo, Harmony and Heritage.

The pier is covered by State Lease PRC 5515, between the CSLC and Venoco/ExxonMobil. This pier is privately owned by Venoco. Access is restricted by an 8-foot (2.4-m) chain link fence. The gate is kept closed and locked unless access is required. A security guard is posted at the pier shelter. The security guard communicates with persons at the front gate and on the pier via an intercom system. The security guard remotely controls access onto the property via the electric gate and onto the pier via an arm-type gate.

### 2.3.2 Platform Holly

Platform Holly is located on State Lease PRC 3242, in the Santa Barbara Channel, approximately 1.9 miles (3 km) southwest of Coal Oil Point. The water depth is approximately 211 feet (64 m).

Platform Holly is a triple-decked drilling and production platform with 30 well slots. The platform was built in 1965 and contains one triple-mast workover rig for well maintenance and workover operations. Two 6.625-inch (17-centimeter [cm]) outside-diameter pipelines transport oil/water emulsion and produced gas to the EOF for processing. Two utility lines (4.5- [11-] and 2.375-inch [6-cm] outside-diameter) can be used for gas, oil, or water transportation. The 4.5-inch (11-cm) pipeline is currently used to transfer fuel gas to Platform Holly, and the 2.375-inch (6-cm) pipeline is currently idle.

Platform Holly's current production is approximately 4,100 barrels per day (BPD) (652 m<sup>3</sup>/day) of crude oil (Venoco 2005c), which is produced as oil/water emulsion comprised of approximately 70 percent water. Platform Holly produces approximately 13,000 million standard cubic feet per day (MMSCFD) (368 million m<sup>3</sup>/day) of gas (approximately 8 MMSCFD (0.2 million m<sup>3</sup>/day) is used for gas lift, and 5 MMSCFD (0.1 million m<sup>3</sup>/day) is sent to the EOF). The platform's permitted production levels are

1 20,000 BPD (3,180 m<sup>3</sup>/day) of oil and water and 20 MMSCFD (0.5 million m<sup>3</sup>/day) of  
2 gas.

3 Platform Holly is manned 24 hours per day, seven days per week. Two platform  
4 operators (at minimum) are on duty at all times.

### 5 **2.3.3 Beachfront Lease (State Lease PRC 421)**

6 The Beachfront Lease is located on State Lease PRC 421, adjacent to the Sandpiper  
7 Golf Course, near Hollister Avenue and Highway 101. The facility occupies  
8 approximately 10,000 square feet (929 m<sup>2</sup>) of pier space and is not currently producing.  
9 Venoco is proposing to return this facility to production. This would entail removal of old  
10 production equipment from Oil Piers 421-1 and 421-2 (California's last remaining oil  
11 piers); repairs to the access road, rock rip-rap wall, and caisson at the end of Pier 421-1  
12 (already completed per Venoco's proposal to the State Lands Commission dated  
13 February 23, 2004.); installation of a drilling rig and new oil separation and processing  
14 equipment on Pier 421-2; and reactivation of the oil well on Pier 421-2, with a capacity  
15 to produce up to 700 BPD (111 m<sup>3</sup>/day) of crude oil. The 421-2 caisson would also  
16 undergo repairs comparable to those already completed at Pier 421-1.

17 The Beachfront Lease is surrounded by an 8-foot (2.4-m) chain link fence. The gate is  
18 kept closed and locked unless access is required. The site is checked twice daily by a  
19 private security firm.

### 20 **2.3.4 Ellwood Onshore Facility**

21 The EOF is located at 7979 Hollister Avenue, west of the city of Goleta and south of the  
22 Southern Pacific Railroad tracks. The facility is located 1,600 feet (488 m) southwest of  
23 the intersection of Highway 101 and Hollister Avenue. Sandpiper Golf Course is located  
24 to the east of the facility and the Bacara Resort is located to the west. The 4.5-acre (1.8  
25 hectares) site is located approximately 900 feet (274 m) inland from the shore. The  
26 facility was originally built in 1966.

27 The EOF was designed with the capability to treat 20,000 BPD (3,180 m<sup>3</sup>/day) of oil.  
28 The current Santa Barbara County Air Pollution Control District (SBCAPCD) permit  
29 limits throughput to 13,000 BPD (2,067 m<sup>3</sup>/day) of oil and 13 MMSCFD (0.4 million  
30 m<sup>3</sup>/day) of gas. The oil and gas are received from Platform Holly, as well as the seep  
31 tent structures located 1 mile (1.5 km) east of Platform Holly.

1 The EOF is manned 24 hours per day, seven days per week. Four persons (at  
2 minimum) are on duty at all times. The facility is surrounded by an 8-foot (2.4-m) chain  
3 link fence with three access gates.

4 The facility's major components include a crude-oil processing system, a gas  
5 sweetening system, a produced-water disposal system, a vapor recovery system, a  
6 process drain system, and a relief system.

## 7 **Natural Seep Tents**

8 The two 350-ton (317.5-metric-ton) steel and concrete pyramids, called "seep tents"  
9 were installed in 1982 by ARCO, the former operator of the EOF and Platform Holly  
10 (Rintoul 1982). The seep tents were positioned on the ocean floor to capture gas and  
11 oil from the natural seeps in South Ellwood Field. Currently, the tents collect the  
12 naturally seeping small amounts of oil as well as approximately 0.3 to 0.4 MMSCFD (8.5  
13 to 11.3 thousand m<sup>3</sup>/day) of natural gas (Venoco 2005a). The tents are 50-foot (15.2  
14 m) high with approximately 10,000 square feet (950 square meters) surface area each  
15 available to capture the seeps. Venoco now maintains those tents (DOE 2004). The  
16 tents send the collected seeps to the EOF through an 8-inch seep gathering pipeline.

## 17 **Crude Oil Processing System**

18 The crude oil/water emulsion is preheated in emulsion/processed crude heat  
19 exchangers and in emulsion/waste water heat exchangers. From the exchangers, the  
20 emulsion is introduced into one of three heater treaters, where the emulsion is  
21 chemically treated, allowing the water to settle. Dry crude from the heater treaters is  
22 stripped of hydrogen sulfide (H<sub>2</sub>S) with sweet gas in the stripper columns to  
23 approximately 65 parts per million (ppm) of H<sub>2</sub>S. Dry, stripped crude proceeds to a  
24 surge tank for settling and interim storage. Characteristics of the processed crude oil  
25 are summarized in Table 2-1. Dry crude from the surge tank is pumped through heater  
26 exchangers to the Lease Automatic Custody Transfer (LACT) surge tank and sold  
27 through a LACT unit.

## 28 **Gas Sweetening System**

29 The gas sweetening system handles platform gas, liquefied petroleum gas (LPG) and  
30 natural gas liquids (NGL) sales gas, and seep gas. Natural gas from the platform is  
31



**Table 2-1**  
**Ellwood Crude Oil Properties Handled at EMT**

Characteristic	Value (Data Source)
Gravity, API	22.4 (1); 20.1-21.7 (2)
Reid Vapor Pressure	2.7 psia (2)
H <sub>2</sub> S Concentration	65 ppm (1)
Sulfur content	4.1% wt. (2)
Wax Content	7.33% wt. (1)
Basic Sediment and Water (BS&W)	Less than 3% (2)
Dynamic Viscosity	50.79 cP (1)

API – American Petroleum Institute (API) gravity.

Sources: (1) - Venoco 1998; (2) - Venoco 2003a.

filtered for removal of entrained liquids, and sulfur is removed via the Lo-Cat unit. The sweetened gas is compressed, processed to remove carbon dioxide, and metered into the sales gas pipeline. The gas process produces NGL, LPG, and sulfur, which are stored and transported to market by truck. Seep gas is also processed, compressed, and metered into the sales gas pipeline. Seep gas is also processed through the iron sponge, compressed, and metered into the sales gas pipeline.

### **Produced-Water Disposal System**

Water removed from oil emulsion in heater treaters is transferred to a settling tank, where additional oil may break out. From the settling tank, water is pumped through filters and emulsion/water heat exchanger. Water is ultimately pumped down the onsite waste disposal well.

### **Vapor Recovery System**

The system collects vapors from various systems throughout the facility, compresses them to approximately 50 pounds per square inch, gauge (psig) (0.3 MPa-g), and adds them to the sour gas at the inlet to the Lo-Cat unit in the gas sweetening system. The vapor recovery system consists of two skid-mounted vapor recovery units operating in series.

### **Process Drain System**

This system includes a hydrocarbon sump, crude oil sump, and two sump pumps.



## 1    **Relief System**

2    The relief system includes a fuel gas scrubber, three Hirt burners, and a flare scrubber.  
3    Relief gases from all pressure vessels are incinerated in a Hirt vent burner. Vapors  
4    derived from the gas sweetening and gas conditioning systems are vented to the fuel  
5    gas scrubber.

### 6    **2.3.5 Line 96**

7    Oil is transported from the EOF to the EMT via Line 96, which is owned by the Ellwood  
8    Pipeline Company and operated by Venoco. The 3.4-mile (5.5-km) pipeline runs east  
9    along Hollister Avenue, turns south on Pacific Oaks Road, and then heads west on  
10    Phelps Road. Past Canon Green Drive, Line 96 turns south to the EMT. The pipeline  
11    consists of approximately 3.3 miles (5.3 km) of 10-inch (25-cm) diameter pipeline and  
12    0.13 mile (0.2 km) of 6-inch (15-cm) diameter pipeline.

13    The average flow rate of Line 96 is 425 barrels per hour (BPH) (68 m<sup>3</sup>/hour) of Group III  
14    crude oil in batch shipments approximately four to six times per day. The maximum  
15    pumping flow rate from shipping pumps at the EOF into Line 96 is 875 gallons per  
16    minute (GPM) (20.8 barrels per minute [bbls/min] or 3.3 m<sup>3</sup>/minute). The normal  
17    operating pressure is 145 psig (1 MPa-g). A computational pipeline monitoring system  
18    is installed and operational for the pipeline. The pipeline remains in service and under  
19    pressure between batch shipments.

### 20    **2.3.6 Ellwood Marine Terminal**

#### 21    **Site Information**

22    The EMT is located less than one mile (1.6 km) west of Coal Oil Point, south and east of  
23    Goleta, California, in unincorporated Santa Barbara County (see Figures 2-1 and 2-2).  
24    Vehicular access to the EMT is via Storke Road and a paved, unnamed service road  
25    commonly known as the Venoco Access Road, south of Ocean Meadows Golf Course.  
26    The 17.5-acre (7-hectare) site is surrounded by a gated chain link fence and is  
27    approximately 500 feet (152 m) from the shoreline bluff at an elevation of 60 feet (18 m)  
28    above sea level. The ground surface inside the facility fence has been filled and is  
29    highly disturbed.

## 1 Major Improvements

2 All improvements described in this section are considered improvements to the lease  
3 and are part of the existing facility. No new improvements to the lease have been  
4 proposed by the Applicant as part of this Project. The offshore equipment associated  
5 with the existing EMT consists of the following:

- 6 • A 12-inch (30-cm) diameter marine loading line extending from the pump house  
7 to the beach, and a 10-inch (25-cm) diameter line offshore from the beach to the  
8 mooring area, with an 8-inch (20-cm) diameter, 240-foot (73-m) long rubber hose  
9 that consists of seven separate sections, connected to the offshore end of the  
10 pipeline;
- 11 • An offshore irregular six-point mooring system for barge operations located in  
12 approximately 60-foot (18-m) water depth, 2,600 feet (792 m) from shore. Each  
13 mooring (can) buoy is approximately 7 feet (2 m) outside diameter (OD) by 10  
14 feet (3 m) long;
- 15 • One 30-inch (76-cm) diameter sphere hose buoy; and
- 16 • One hose-end marker buoy.

17 The onshore equipment associated with the EMT consists of the following:

- 18 • Two 65,000-barrel (10,334-m<sup>3</sup>) (normal capacity), riveted construction, internal  
19 floating-roof crude oil storage tanks (referred to as Tanks 8264 and 8265).
- 20 • One 10,000-barrel (1,590-m<sup>3</sup>), bolted American Petroleum Institute (API)  
21 firewater tank erected in 1950;
- 22 • A pump house with two electrically driven pumps (400 horsepower total) capable  
23 of loading the offshore barge at a rate of 4,200 BPH (668 m<sup>3</sup>/hour);
- 24 • A control room containing the switchgear and controls and instrumentation for  
25 monitoring the tanks and operation of the shipping pumps;
- 26 • Two 12-inch (30-cm) diameter temperature compensated meters with net and  
27 gross head printers; and
- 28 • 2.375-inch (5-cm) diameter city water supply pipeline.

The current 10-inch (25-cm) sub-sea section of the loading line was installed in 1968, replacing the original 10-inch (25-cm) section that was originally installed in 1929 concurrently with the installation of the EMT storage tanks. The current 10-inch (25-cm) loading line is 10.75-inches (27-cm) in outside diameter, with a 0.4-inch (1-cm) wall thickness.

Piping, instrumentation, and process information for the Onshore Improvements is provided on Venoco's Drawing 12181 (see Figure 2-3).

## **General Operating Characteristics**

### *Volumes and Barge Calls*

South Ellwood Field crude oil is delivered to Venoco's markets by the barge Jovalan. The barge Jovalan is loaded with crude oil from Platform Holly that has been delivered to the storage tanks in the EMT. The barge is loaded approximately 25 times per year; the loading operation is completed in 13 to 17 hours (MMS 2000). Currently, the barge Jovalan delivers the Ellwood crude oil to Venoco's market facilities in Long Beach Harbor and the San Francisco Bay areas.

The EMT's permitted throughput is 13,000 BPD (2,067 m<sup>3</sup>/day). Table 2-2 shows the annual throughput summary for the EMT for the last seven years, including the aggregate annual barrels of crude oil loaded onto the barge Jovalan (terminal deliveries) and the number of times the barge Jovalan was loaded on an annual basis (terminal barge calls). Average barge loadings are 52,777 bbls (8,390) per load between 1998 and 2004.

It is anticipated that the number of terminal barge calls will gradually increase until the expiration of the State lease in 2013. A maximum annual number of barge trips of 88 are anticipated. In September 2001, the CSLC approved the re-drilling of three production wells from Platform Holly, which will increase oil production from the South Ellwood Field by 1,500 to 2,000 BPD (238 to 318 m<sup>3</sup>/day), or 547,500 to 730,000 annual barrels (87,043 to 116,057 m<sup>3</sup>) of crude oil. It is Venoco's intent to seek approval to re-drill other active and non-active wells from Platform Holly over the remaining term of the State lease to increase further the production of crude oil at Platform Holly.

Electric power for the EMT is obtained from the regional electric grid system. Recent electric power consumption rate at the EMT has been approximately 150 kilowatts (kW) during barge loading operations. The remainder of the time there is a negligible load.

**Table 2-2**  
**Ellwood Crude Oil Deliveries from the EMT**

Year	Terminal Deliveries, barrels (m <sup>3</sup> ) per year	Terminal Barge Calls
1998	1,264,159.74 (200,979)	24
1999	1,389,550.37 (220,914)	27
2000	1,319,544.86 (209,785)	26
2001	1,202,419.69 (191,164)	23
2002	1,301,142.32 (206,859)	24
2003	1,240,342.65 (197,193)	23
2004	1,190,925.17 (189,336)	22

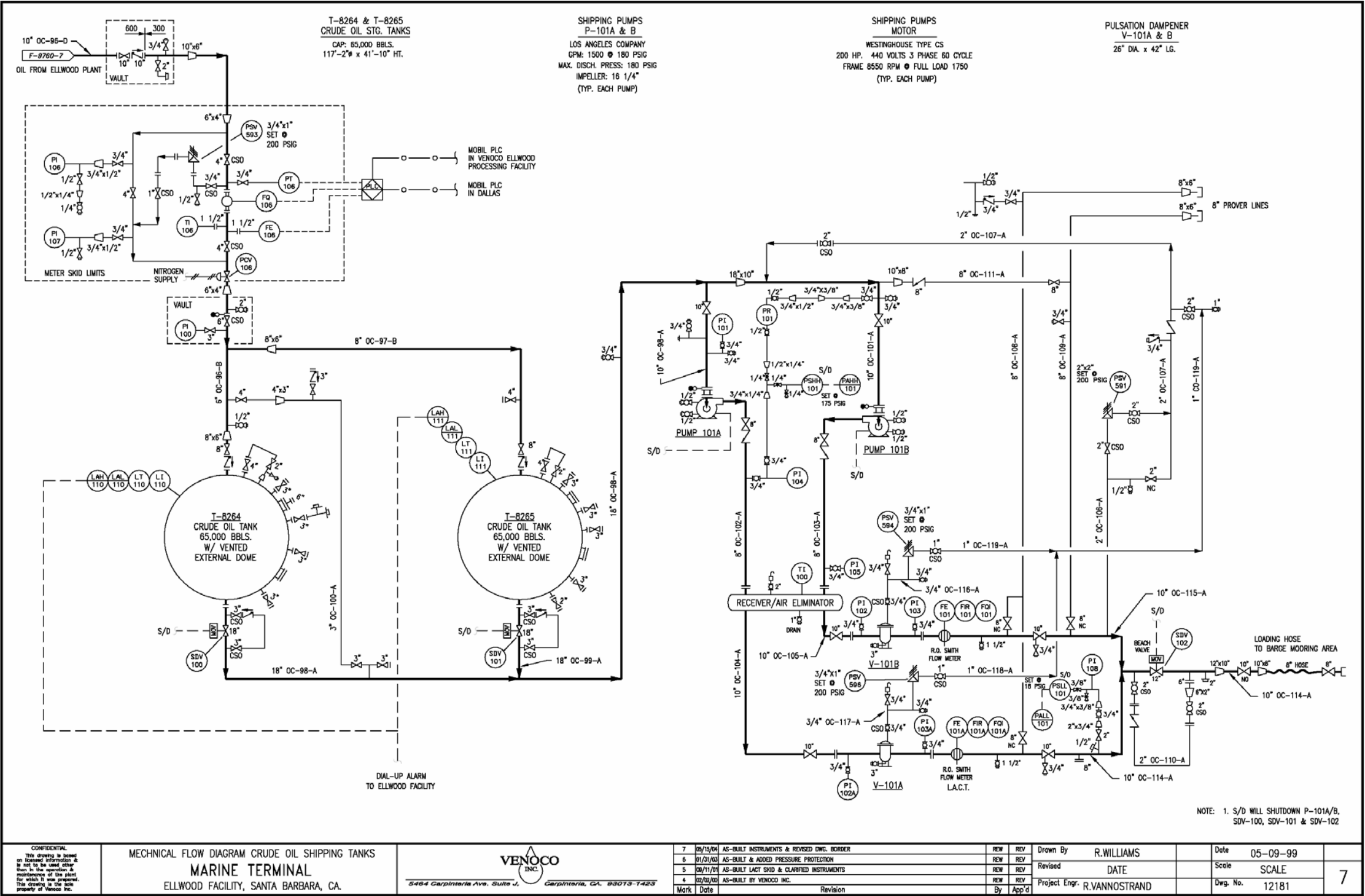
Source: Grieg 2005.

#### *EMT Tanks 8264 and 8265*

Tanks 8264 and 8265 are 65,000-barrel (10,334-m<sup>3</sup>) (normal capacity), riveted construction, internal-floating-roof crude oil storage tanks. These tanks were erected in 1929 and were renovated in 1977 by replacing the bottoms, repairing the roofs (single deck), installing new double roof seals and a freely vented domed roof, and sandblasting/painting the exterior surfaces. Additional renovations occurred in 1983, including the replacement of the double roof seals on the tanks. Each storage tank has a separate bermed containment area, capable of containing 110 percent of the tank's capacity.

The storage tanks are equipped with internal floating roofs, which intrinsically incorporate emission controls to capture and control breathing, working, and withdrawal losses via their roof designs and seal systems. These intrinsic controls comply with the APCD Rules. No additional vapor recovery systems are currently installed to further collect and control any breathing, working, or withdrawal losses that occur. Withdrawal losses occur from crude oil that clings to the inside walls of the tank and subsequently volatilizes to give off reactive organic compounds (ROCs) into the headspace volume between the top of the floating roof pan and the fixed dome tank roof. Because the fixed-dome tank roof is freely vented, volatilized ROCs then escape to the atmosphere. Withdrawal losses occur at their highest rate after a tank is emptied of its stored crude volume by load-out to the barge Jovalan (SBCAPCD 2004a).

Figure 2-3  
Venoco EMT Piping and Instrumentation Diagram



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For internal inspection or for pressure testing that occurs annually, the submarine pipeline is cleared by filling it with sea water, which is then transferred into the EMT storage tanks. Water from the tank bottoms and the wastewater sump may either be bled from the tanks directly into highway tanker trucks or shipped with the oil onto the barge Jovalan (SBCAPCD 2004b).

In April 2005, the two crude oil storage tanks at the EMT were discovered to have significant corrosion issues, which contributed to increased emissions from the tanks. Corrosion caused the floating roofs of both tanks to fail and allowed the crude oil stored in the tanks to leak up and onto the surface of the roofs.

Extensive repairs started in May 2005, including floating roof and tank floor repairs, and have been supervised by the APCD. Tank 8265 has been cleaned, repaired, repainted, tested and put back in service in September 2005. Tank 8264 has undergone several repairs due to corrosion, and has been internally treated with anti-corrosion coating; as of beginning of December 2005 it is undergoing tests that would allow it to be put back in service.

The Spill Prevention Control and Countermeasure Plan for the EMT (Venoco 2004b) indicates that a walk-through of the whole EMT facility is conducted daily, detailed visual external tank inspections are conducted monthly, detailed tank containment berm integrity inspections are conducted annually, and that detailed tank inspections by an outside contractor, as per API 653, are conducted every 10 years.

#### *EMT Loading Line*

The EMT Loading Line consists of 12-inch (30-cm) and 10-inch (25-cm) diameter pipe totaling approximately 3,600 feet (1,097 m), and approximately 240 feet (73 m) of 8-inch (20-cm) diameter hose. The barge mooring point is 2,600 feet (792 m) offshore in approximately 60 feet (18 m) of water. See Figure 2-1 for a diagram of this system. Venoco typically loads the barge Jovalan two to three times a month with 55,000 bbls (8,744 m<sup>3</sup>) of crude per load. The typical loading rate is 4,200 BPH (668 m<sup>3</sup>/hour) at a pressure between 120 and 150 psig (0.8 to 1.0 MPa-g).

The loading line is coated externally and equipped with cathodic protection. In the surf zone area, the pipe is covered with a mastic covering and wrapped with all-weather pipe wrap tape to the 10-inch (25-cm) flange; the remainder of the pipe is coated with 0.06-inch (0.15-cm) Tru-Coat plastic coating. During the 1998 storms, the beach section of



1 the pipeline was exposed and sections of the pipeline were shown to have deteriorated  
2 pipe wrap and some external corrosion.

3 The underwater pipeline and loading hose are inspected and tested annually, including  
4 vacuum testing of the hose, pressure hydrotesting of the pipeline, visual inspection by a  
5 diver of the pipe end location, and cathodic protection readings. Venoco monitors the  
6 cathodic protection monthly.

7 The EMT receives oil from Line 96 into Tanks 8264 and 8265. From there, the oil is  
8 shipped from one of the two tanks, through the shipping pumps and LACT units,  
9 through the pipeline, and into the barge offshore. The loading is controlled locally at the  
10 EMT control room, where an operator monitors flow and pressures.

### 11 *EMT Loading Line Valve Stations and Connections*

12 The EMT Loading Line originates at the EMT pump house and terminates  
13 approximately 2,600 feet (792 m) offshore. Between the pump house and the shoreline,  
14 there is one 12-inch (30-cm) diameter motor operated valve, commonly referred to as  
15 the field valve. This valve is located above ground and is approximately 500 feet (152  
16 m) downstream of the pump house. The field valve is interlocked with the Emergency  
17 Shutdown System (ESD) and can be closed in approximately 40 seconds. The valve is  
18 normally closed except during loading operations. The ESD system for the terminal can  
19 be activated from the following locations:

- 20 • Top of dike at each tank access catwalk;
- 21 • Inside the control house; and
- 22 • From the barge by radio signal.

23 Between the shoreline and terminus of the EMT Loading Line, there are two sub-sea  
24 block valves and a 240-foot (73 m) section of 8-inch (20-cm) diameter hose sections,  
25 which are briefly described in Table 2-3.

### 26 *EMT Loading Line Pumps*

27 At the EMT, the shipping pumps used for the loading line are pumps P-101A and P-  
28 101B. The pumps are operated in parallel and both are used during each barge loading  
29 operation. The procedures described in the EMT Operating Manual indicate that the  
30

**Table 2-3**  
**EMT Valve Stations and Connections Locations**

Valve/Connection	Milepost	Approximate Location	Comments
12-inch (30-cm) 150# MOV Block Valve (Beach Valve)	0.147	775 feet (236 m) from existing EMT shipping pumps.	This valve normally remains closed. This valve is interlocked with the Emergency Shutdown System (ESD) located at the EMT
8-inch (20-cm) 300# Block Valve	0.742	2,600 feet (792 m) offshore in 60 feet (18 m) of water	This valve normally remains open.
8-inch (20-cm) 150# Hoses seven sections, No. 1-7	0.742 - 0.833	2,600 feet (792 m) offshore in 60 feet (18 m) of water	The hoses are flanged together.
8-inch (20-cm) 150# Block Valve	0.833	2,600 feet (792 m) offshore in 60 feet (18 m) of water	At end of valve, there is a flanged 10-inch (25-cm) by 8-inch (20-cm) reducer with an end cap. This is the valve that is hoisted up to the barge for loading.

Source: Venoco 2003a.

pumps are started from the EMT control house. Pumps 101A and 101B are equipped with a high-pressure shutdown switch set at 175 psig (1.2 MPa-g) and a 2-inch (5-cm) by 2-inch (5-cm) relief valve set at 200 psig (1.4 MPa-g). However, the dead-head pressure for the pumps is 180 psig (1.2 MPa-g), which is less than the maximum allowable operating pressure. Normal shipping flow rate for the two pumps is 4,200 BPH (668 m<sup>3</sup>/hour) at a discharge pressure of 140 psig (1.0 MPa-g).

### 2.3.7 Barge Jovalan

Public Service Marine, Inc. is the owner and a co-operator of the barge Jovalan; Venoco is the other operator. The barge Jovalan is a singled-hulled barge built in 1979 that has been operating at the EMT since the 1980s. Under the existing permits and certificates of financial liability, the barge Jovalan is the only barge allowed to transport oil from the EMT. The barge Jovalan is 300 feet (91 m) long and 68 feet (21 m) wide, with a loaded draft of 18.5 feet (6 m). The barge Jovalan is equipped with four diesel-fired engines to power the compressor and refrigerator systems of the onboard Vapor Recovery Unit (VRU) and to supply hydraulic power for the mooring cable winches. The barge is towed by a tug and has no other means of propulsion or steerage.

The maximum barge capacity is 56,000 bbls (8,903 m<sup>3</sup>) and the capacity for South Ellwood Field crude oil's specifications is 55,000 bbls (8,744 m<sup>3</sup>). Currently, the frequency of barge loading is approximately two to three times per month. Barge-

loading operations require approximately 24 hours for completion. Details of the barge vapor recovery system and descriptions of the vessels that move and assist the barge are provided later in this section.

The oil is transported to refineries in the Ports of Los Angeles/Long Beach or San Francisco Bay areas.

The barge Jovalan does not use ballast water in any of its operations.

## **Vapor Recovery System**

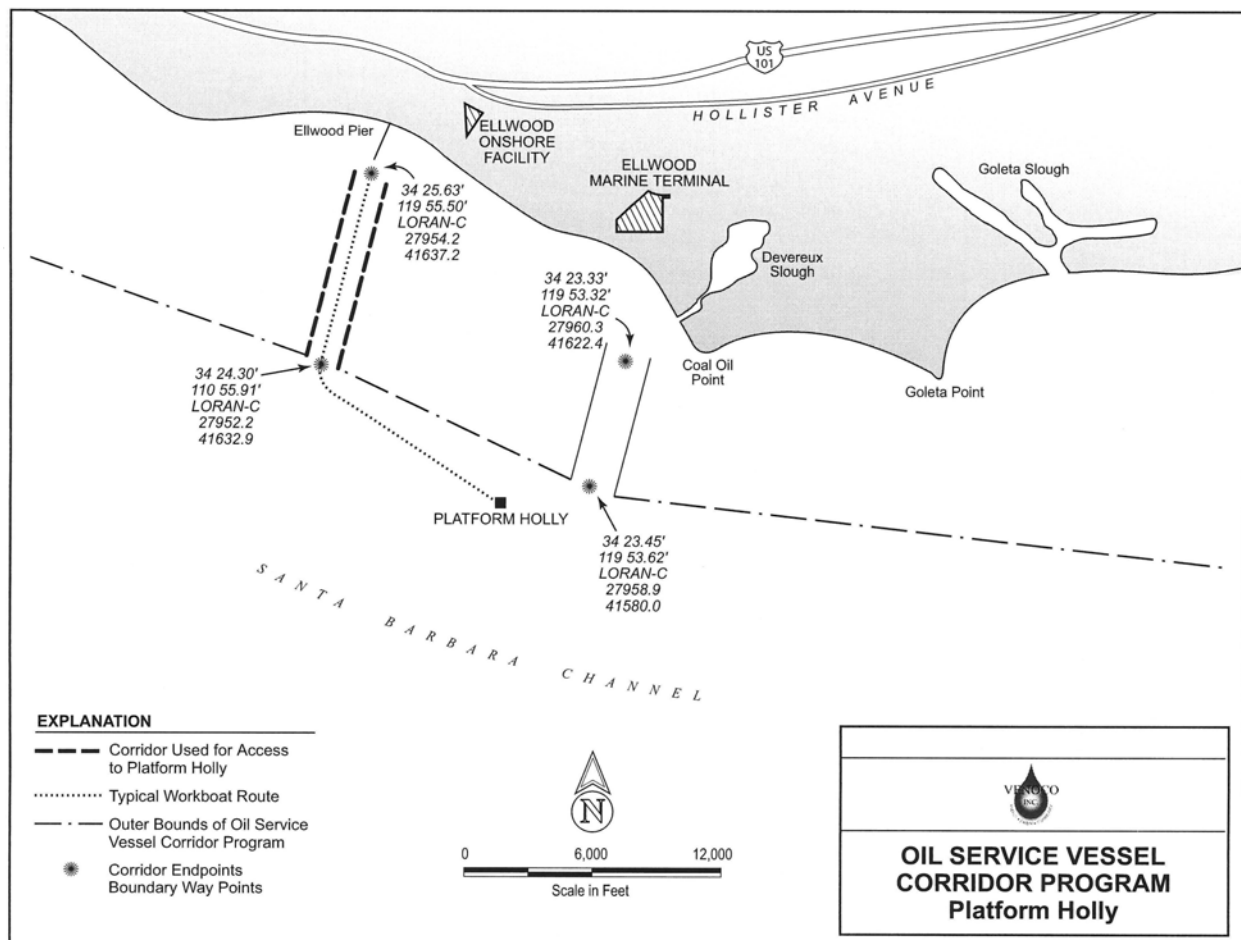
The primary control system on the barge Jovalan is a VRU, which is designed to collect and control displaced barge hold headspace vapors present during crude oil loading into the barge. Each of the eight holds is equipped with vapor recovery piping and a pressure/vacuum relief device (PRD). The PRDs are set to relieve headspace vapors directly to the atmosphere if any hold headspace exceeds 14 inches of water pressure (0.51 psig or 0.004 MPa-g) above atmospheric. The hold pressure is held at 4.8 inches of water when the barge is moored but not being loaded. During crude oil loading, the hold pressure is maintained at 0.2 inches of water through loading rate adjustment. The PRDs will also relieve headspace vapors if excess vacuum pressure into the holds occurs. When operating as designed, the PRDs remain closed. The vapor piping from each hold first routes displaced vapors to a caustic scrubber system to remove hydrogen sulfide (H<sub>2</sub>S) (up to approximately 1,600 parts per million by volume [ppmv] inlet H<sub>2</sub>S concentration). From the scrubber, the vapors are then compressed, and sequentially refrigerated to at least a minus 150 degrees Fahrenheit (-101 degrees Celsius [C]) temperature, in several stages, to condense hydrocarbons. The condensed hydrocarbons are commingled with the incoming crude oil flowing to the holds on the barge.

Residual headspace and entrained hydrocarbon vapors exiting the VRU are delivered to the intake air feed of a Detroit Diesel, Model 6V-71T diesel-fired internal combustion engine (ICE). The ICE combusts the combined residual vapor and associated reactive organic compounds (ROCs). The combustion products of the ICE exit through the ICE exhaust stack. Pursuant to Rule 327, section C, of SBC APCD Rules, ROC emissions from the combined VRU and ICE control system are not allowed to exceed 0.073 pound (lb)/1,000 gallons (8.767 grams/m<sup>3</sup>) of crude oil loaded. The ICE is then used to power the compressor and refrigeration systems of the VRU.

## Shipping Routes for the West Coast

The barge Jovalan follows prescribed transit routes for the West Coast of the United States. The barge is towed behind the tug connected by a 2-inch (5-cm) wire rope and a bridle chain at a distance of approximately 1,000 feet (305 m). Vessel traffic lanes have been established for north, south, and west entrance approaches to San Francisco, and Los Angeles and Long Beach harbors, as well as at the EMT in Santa Barbara County. Figure 2-4 shows the oil service vessel corridors for Platform Holly and the EMT. Each approach consists of an inbound lane, and outbound lane, and separation zone. A precautionary area is also established where traffic is merged.

**Figure 2-4**  
**Barge Shipping Routes**

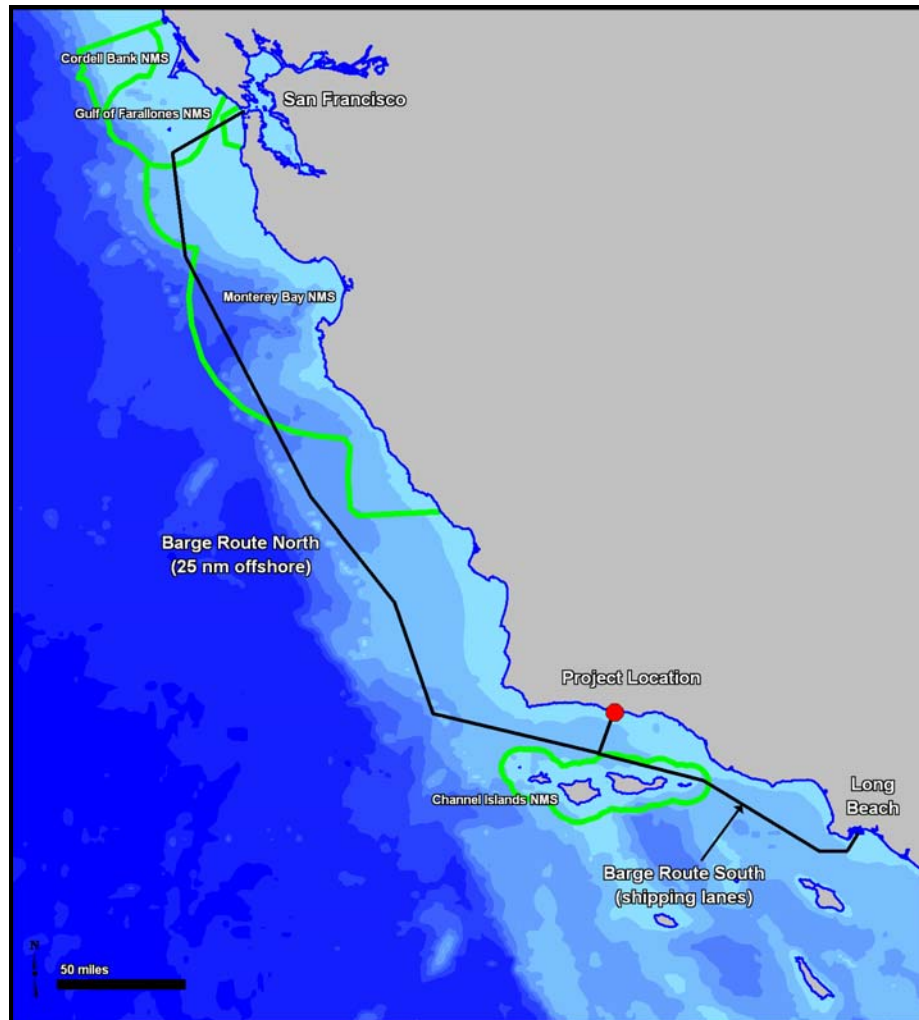


Source: Venoco 2003a.

1 Once inside the precautionary area, vessels use the U.S. Coast Guard (USCG) Vessel  
2 Traffic Service established in the various ports and adhere to the specific traffic lanes on  
3 established charts for each port.

4 Figure 2-5 shows the routes to San Francisco and Long Beach.

5 **Figure 2-5**  
6 **West Coast Shipping Routes**



7  
8 Source: NOAA Vessel Routes.

9 **2.4 EMT Operation, Maintenance, and Safety Controls**

10 **2.4.1 EMT Operating Procedures**

11 EMT operating procedures are detailed in the EMT operations manual, as submitted to  
12 CSLC in May, 2004 (Venoco 2004a). The operating procedures detail the facility

1 information, facility procedures, facility training, vapor recovery system, clearance  
2 issues, environmental conditions, navigational aides, support vessels, mooring  
3 procedures and tug/towing arrangements. Mooring, loading, shutdown, unmooring and  
4 emergency shutdown procedures are discussed below.

## 5 **Mooring Procedures**

6 Two vessels are required to move the barge Jovalan in and out of Santa Barbara  
7 County waters, and to moor and unmoor it from the EMT. A “tug” vessel with three crew  
8 members is used to move the barge Jovalan within Santa Barbara County waters  
9 (including the Outer Continental Shelf). The other vessel, the “assist” vessel, with two  
10 crew members is used primarily to assist the tug and the barge Jovalan with mooring  
11 and in coupling the offshore crude oil loading lines. The personnel are USCG  
12 qualified/licensed Mooring Masters and Assistant Mooring Masters. No specific tug or  
13 assist vessels are identified in the SBCAPCD permit.

14 A third vessel, an emergency response vessel, is also present during mooring and  
15 loading operations. This fishing boat, with one crew member, is available to assist with  
16 deploying oil containment booms, if necessary. The emergency response vessel also  
17 provides security by preventing other vessels from entering the mooring area during  
18 loading operations.

19 The tug, assist vessel, and barge Jovalan approach the mooring area from the south  
20 through the safety fairway. The tug and barge Jovalan then turn into the mooring area  
21 between Buoys 2 and 3 and proceed westerly while the assist vessel deploys the  
22 mooring lines to Buoys 2, 3, and 4. With the barge in position, mooring wires are  
23 deployed to Buoys 1 and 5. The tug is moored to Buoy 6. Please see Figure 1-1.  
24 During loading of the barge, the engines of the tug and assist vessels are typically shut  
25 off, with the exception of the generators.

## 26 **Existing Barge Loading Procedures**

27 The mooring personnel check in at the EOF with the plant operator. The Terminal  
28 Person in Charge (TPIC) checks the mooring terminal, turns on all necessary marine  
29 terminal lighting, and checks the radios at the pump control house to ensure that the  
30 radios have been placed on the charger 24 hours prior to the barge loading. The TPIC  
31 then inserts meter tickets in the two LACT units. Varec® brand level indicators for each  
32 storage tank are read and recorded, starting the hourly log.

1 The TPIC slowly opens the motor valve on the tank that will be loaded and checks the  
2 oil levels in both pumps. When loading is done out of Tank 8265, the vent valve on  
3 Tank 8264 must be closed, and vice versa. The suction valves on both pumps are  
4 opened.

5 The TPIC performs the following radio checks: barge, tug, Venoco representative on  
6 the barge Jovalan, and line launch. The TPIC then conducts a pre-transfer conference  
7 and records information on the log sheet before initiating and completing the  
8 Declaration of Inspection. The time of arrival, first line, all fast, hose connected, VRU  
9 on, and loading start time are established between the mooring master and the TPIC.

10 When the barge captain requests oil, the TPIC asks if the barge valve is open. When  
11 the barge captain responds: "Yes the barge valve is open," the EMT operator then  
12 states that the field valve will be opened. After the field valve is opened, the TPIC  
13 notifies the barge captain when the discharge valves on the shipping pumps are opened  
14 and records this as the starting time.

15 The TPIC allows at least 100 bbls ( $16\text{ m}^3$ ) to flow by gravity through the pumps and then  
16 turns on the No. 1 pump after receiving approval from the barge captain. After waiting  
17 approximately five minutes, the barge operator gives approval for the No. 2 pump to be  
18 turned on. The barge captain is notified before each pump is turned on. The pump by-  
19 pass valve is closed, and hourly readings are recorded for the following: Varec® gauge  
20 of shipping tank, hourly shipping meter volumes, cumulative cargo loaded, pumping  
21 suction and discharge pressures, pump motor amperages and voltages, radio  
22 communication check with barge, comparative gauging readings, and wind direction  
23 and speed.

24 The TPIC ensures that the tanks gravity feed the barge at 1,800 BPH ( $286\text{ m}^3/\text{hour}$ ).  
25 One pump will load the barge at 3,200 BPH ( $509\text{ m}^3/\text{hour}$ ), and two pumps will load the  
26 barge at 4,500 BPH ( $715\text{ m}^3/\text{hour}$ ). The tanks are never to be pumped below 4 feet (1.2  
27 m). The maximum average load rate is less than 4,200 BPH ( $668\text{ m}^3/\text{hour}$ ).

28 The TPIC ensures that when one pump is running, the pump discharge pressure is from  
29 90 to 120 psig (0.6 to 0.8 MPa-g). When two pumps are running, the pump discharge  
30 pressures for each are from 138 to 152 psig (0.9 to 1.0 MPa-g). If a low-pressure  
31 shutdown on the EMT Loading Line (discharge pressure) occurs, the barge captain is  
32 contacted by radio and informed of the shutdown. The TPIC then verifies that all motor-  
33 operated control valves are closed and walks the loading line. The TPIC then calls the  
34 mooring master and has the stand-by vessel make a pipeline run. If all inspections



1 confirm that no leakage occurred, the Ellwood Operations Supervisor is called for  
2 authorization to restart loading operations. Then, the barge captain is notified, and  
3 pumping operations are restarted.

4 If the tanks must be switched, the barge captain is notified by radio and informed of a  
5 shutdown (to switch tanks). The pumps are shut off, and the discharge valves on both  
6 pumps are closed. The shipping valve on the empty tank is closed and the shipping  
7 valve on the full tank is opened. The TPIC radios the barge captain when loading  
8 commences, and then the discharge valves on both pumps are opened. The No. 1  
9 pump is started first and then the No. 2 pump is started after the pressure has  
10 stabilized. The barge captain is again notified as during original loading start-up.

### 11 **Barge Loading Shutdown Procedures**

12 The barge captain, tug captain, or TPIC can call for a shutdown. If the barge captain  
13 calls for a shut-down, the EMT operator turns off both pumps. There is one pair of  
14 "shutdown" switches in the control room and a pair of "on" and "off" switches in the  
15 pump house. The barge captain closes the Nordstrom brand valve on the marine hose  
16 at the barge and informs the TPIC that the "valve is closed." As soon as the power is  
17 off, the TPIC closes the field valve and informs the barge captain of the "all shut down"  
18 status before opening the circuit breakers to the pump motors. The TPIC then proceeds  
19 to close suction and discharge pump valves and open pump by-pass valves and vent  
20 valves at Tank 8264 and/or Tank 8265. The barge captain then proceeds to disconnect  
21 the marine hose and install a blind on the hose end before lowering to the ocean floor.  
22 The barge captain then informs the operator that the "hose is on the bottom." The  
23 barge captain informs the TPIC of the "all secure" status and of the time that the tug will  
24 be at the pier, the average VRU temperature, and the time of sailing from the mooring.  
25 The EMT operator records the tank levels from the Varec® level indicators, removes  
26 meter tickets from the LACT, and calculates the cargo volumes. The EMT operator  
27 completes the marine terminal delivery form to indicate beginning inventory in each  
28 tank, ending inventory in each tank, gross and net volumes shipped out of each tank,  
29 percentage of bottom sediment and water, API gravity, and total gross and net cargo  
30 loaded.

### 31 **Unmooring Procedures**

32 The tug is let go from Buoy 6 and the hawser is shortened. Mooring lines are taken  
33 aboard the barge. The barge is towed from the mooring area between Buoys 1 and 6.

## **Emergency Shutdown Procedures**

The TPIC must stop the transfer operation whenever oil from any source is discharged in the transfer operation work area or into the water or adjoining shoreline in the transfer area. Transfer operations may resume only after oil spilled in the work area is cleaned up and/or oil discharged into the water or adjoining shoreline is cleaned up or is contained and is being cleaned up.

Emergency shutdown of loading operations can be initiated by the TPIC, the Venoco representative aboard the barge, or the barge captain. The pump start valve and pump stop switches are located in the pump house. The control room has only pump "stop" switches. Field switches and tank valves must be activated manually. Emergency Shutdown (ESD) switches are located at both stairways over the berms leading to each of the crude oil storage tanks. When ESDs at stairways are activated, pumps automatically turn off, and all motor-operated valves (MOVs) close, isolating the loading line. Pressure on the loading line is continually recorded on a circular chart in the control room near the operator's work area. The operator observes the pressure frequently and records the pressure hourly. When a pressure drop is noted, the operator will activate the ESD system immediately, ensuring that the field switches and tank valve are closed. The MOVs will close within 60 seconds of activation of the ESD system.

Loading operations are ceased if the winds exceed 20 knots (37 km/hour) from the north, 20 knots (37 km/hour) from the south, or if the seas exceed 5 feet (1.5 m). Also, loading will be terminated immediately if a leak occurs in the line, or upon the command of the Venoco representative. If for any reason it becomes necessary for the barge captain to initiate an emergency shutdown of loading operations, this can be accomplished remotely via hand-held radios carried onboard the barge by the Venoco representative and tankerman. The coded shutdown turns off the terminal cargo pumps and closes the MOVs.

### **2.4.2 EMT Maintenance and Safety Systems**

## **Inspection Programs**

Facility inspections are performed by numerous agencies, including the CSLC, the SBCAPCD, the USCG, the Santa Barbara County Fire Department, and the Santa Barbara County Planning and Development Department. The Marine Facilities Division of the CSLC has jurisdiction over terminal operations. The USCG has joint jurisdiction

1 with the CSLC on the EMT Loading Line. The State Fire Marshal, city of Goleta, and  
2 Santa Barbara County share jurisdiction of Line 96, the supply oil pipeline from the  
3 EOF.

4 The Marine Facilities Division of the CSLC conducts annual inspections of the facilities.  
5 The local agencies also conduct an annual inspection per the facility's Safety,  
6 Inspection Maintenance and Quality Assurance Program. The SBCAPCD conducts  
7 annual inspections of the facilities, including oversight of the VRU system aboard the  
8 barge.

9 The tanks and lines for the EMT are inspected by certified inspectors in accordance with  
10 American Petroleum Institute Recommended Practice API 500, 653 and API 570. In  
11 addition, the tank primary and secondary floating-roof seals are inspected annually  
12 pursuant to SBCAPCD guidelines. Venoco also conducts internal safety walkthroughs  
13 on a monthly basis.

#### 14 **Security Program**

15 Venoco is required to comply with sections 2430 *et seq.* of Title 2, Division 3, Chapter 1,  
16 Article 5.1 of the California Code of Regulations and 33 CFR, Part 105, requiring a  
17 physical security program for marine terminals. Facility security protective measures  
18 change dependent on current USCG Maritime Security (MARSEC) threat levels. A  
19 written facility security plan is in place and is implemented by facility operations. Only  
20 authorized personnel are allowed access to the EMT, barge, and support vessels  
21 through the EOF or the Ellwood Pier. Personnel entering the facility must sign in with  
22 security staff and show valid identification. Personal and vehicle searches are  
23 conducted according to current USCG MARSEC directives. Any personnel wishing  
24 entrance to the barge must be on an authorized list or have approval from the facility  
25 security officer and/or a vessel security officer.

26 Only Venoco company vehicles and other vehicles pre-authorized and approved by the  
27 facility security officer are permitted entry to the EMT. Company vehicles are used for  
28 routine operations and maintenance activities. Pedestrians do not have access to the  
29 EMT.

30 The EMT is surrounded by an 8-foot (2.4-m) chain link fence. The facility gate is kept  
31 closed and locked unless access is required. The facility is patrolled at night and on  
32 weekends by a private security firm.

1 Exterior lighting is provided at the EMT to allow for nighttime operations and security.  
2 Lighting is provided by permanent fixtures between sunset and sunrise, and during  
3 times of reduced visibility. The barge Jovalan is equipped with three sets of floodlights  
4 that provide deck lighting.

5 The EMT area is surrounded by areas open to public access; however, physical security  
6 measures, such as fences, locked gates, and razor wire, prohibit unwanted entry.

### 7 **Storm Water Management, Drip, and Recovered Oil Collection**

8 The atmospheric oil storage tanks, pump house, and shipping meters are all provided  
9 with engineered secondary containment. During loading operations, the barge loader  
10 frequently monitors shipping operations for leaks. During off-hours, the facility  
11 equipment and containment areas are inspected every six hours for leaks. The  
12 containment areas are isolated at all times, and after evaluation of any collected storm  
13 water, the material is removed by vacuum truck or storm water is allowed to drain in a  
14 controlled manner to the adjacent land surrounding the facility. Storm water  
15 management practices are discussed in more detail in Section 4.4, Hydrology, Water  
16 Resources, and Water Quality.

17 In accordance with 40 CFR Part 112, the EMT has an up-to-date Spill Prevention,  
18 Control, and Countermeasure Plan in place and implemented by facility operations  
19 (Venoco 2004b). Spill controls are further addressed in the South Ellwood Field  
20 Emergency Action Plan (EAP) and are summarized below.

### 21 **Oil Spill Response Capability**

22 Venoco's South Ellwood Field EAP is in place and implemented by facility operations  
23 (Venoco 1998). The EAP includes a facility-based initial incident response team (IIRT)  
24 and a corporate-based sustained incident response team (SIRT) for all on-water,  
25 beachfront, onshore, and shallow-water response. The California Department of Fish  
26 and Game Office of Spill Prevention and Response (OSPR), the Santa Barbara County  
27 Fire Department, and the Santa Barbara County Office of Emergency Services approve  
28 the EAP.

29 Venoco maintains an Oil Spill Contingency Plan (OSCP) for the South Ellwood Field  
30 that covers the EOF, EMT, Line 96, Ellwood Pier, Platform Holly, and Beachfront Lease  
31 PRC 421. The OSCP (Venoco 2005b) details the inspection and maintenance

procedures as well as training and drills for the covered facilities, in addition to the spill response capabilities.

Venoco contracts for spill response services with Clean Seas and Advanced Cleanup Technologies Inc. (ACTI), and lists these as their Oil Spill Response Organization (OSRO) contractors in the South Ellwood Field EAP. Clean Seas' and ACTI's immediate equipment capacities in the area include:

#### *Equipment*

- Initial response containment equipment for the EMT is stored onboard the barge Jovalan and Platform Holly. Procedures for deploying the oil-containment boom from the barge and the equipment available to respond to an oil spill are detailed in the EAP.

#### *Vessels*

- Platform Holly crew boat stationed at the Ellwood Pier and staffed 24 hours a day;
- Platform Holly Boston Whaler stationed at Platform Holly and staffed 24 hours a day;
- Clean Seas Oil Spill Response Vessel (OSRV) *Mr. Clean* stationed at the Santa Barbara Harbor; and
- Clean Seas Fast Response Spill Boat (FRSB) *Clean Sweep* stationed at the Santa Barbara Harbor.

#### *Skimmers*

- The Clean Seas OSRV has three open ocean skimmers on board at all times ready for service.

#### *Oil-Containment Booms*

- 1,500 feet (457 m) of heavy duty boom, i.e., 70-inch (178-cm) Expandi Boom or Kepner 24-inch (61-cm) High Seas Boom; and
- 3,000 feet (914 m) open ocean boom, i.e., oil stop continuously inflatable and/or 43-inch (109-cm) Expandi Boom with Roto Pak recovery system.

In the event of a spill, Clean Seas has an extensive inventory of spill containment and recovery equipment, response vessels, equipment trailers, vehicles, sorbents, and miscellaneous support equipment.

### *Tertiary Response (Advanced Cleanup Technologies, Inc.)*

ACTI is Venoco's primary contractor for onshore and shoreline cleanup. ACTI also provides secondary response to Clean Seas for offshore spill response equipment. ACTI has sufficient resources and trained personnel to satisfy all Federal and State onshore and shoreline cleanup planning requirements. A summary of equipment at various locations is provided below:

- Baker tanks, 500 bbls (79 m<sup>3</sup>) each;
- Vacuum trucks, 70 to 120 bbls (11 to 19 m<sup>3</sup>) each;
- Skimmers;
- River and canal/inland boom;
- Offshore boom; and
- Barges (105,210 bbls [16,727 m<sup>3</sup>] total capacity).

Clean Seas and ACTI have arrangements with Clean Coastal Waters, based in Long Beach, California, and Clean Bay, based in Concord, California, which can provide numerous cascable resources. The cascable response equipment is readily available to assist in spills outside of their Areas of Response and is included in Venoco's response plans by reference.

The U.S. Navy Supervisor of Salvage (SUPSALV) provides full-service response capability. SUPSALV maintains an inventory of oil spill response equipment in Port Hueneme, California, which is deployed and operated by trained contract personnel. This equipment would be activated through the USCG On-Scene Coordinator.

### *Fire Prevention and Preparedness Plan*

Venoco's Fire Prevention and Preparedness Plan for the South Ellwood Field Facilities (Venoco 2003b) identifies the measures that would be implemented and maintained in the event of a fire or emergency. Venoco personnel utilize the resources cited in this plan to implement safe and effective response actions prescribed by this plan in

conjunction with the South Ellwood Field EAP, the Oil Spill Contingency Plan for the South Ellwood Field (Venoco 2005b), Emergency Evacuation Plans, and H<sub>2</sub>S Contingency Plans. The Fire Prevention and Preparedness Plan, when supplemented by the South Ellwood Field EAP, fulfills Occupational Safety and Health Administration (OSHA) requirements for a Fire Prevention Plan as cited in 29 CFR 1910.38(b).

## **2.5 ENVIRONMENTAL COMMITMENTS PROPOSED BY VENOCO**

It should be noted that any mitigation measures incorporated within the Project's design cannot be considered mitigation measures under the CEQA. If they reduce a potentially significant impact to a level below significance, they eliminate the potential for that significant impact, since the "measure" is now an integral component of the Project. Venoco has not identified any Applicant-proposed mitigation measures.

## **2.6 ENVIRONMENTAL COMPLIANCE INSPECTION AND MITIGATION MONITORING**

As the Lead Agency under the CEQA, the CSLC is required to adopt a program for reporting or monitoring the implementation of mitigation measures for this Project, if it is approved, to ensure that the adopted mitigation measures are implemented as defined in this EIR. This Lead Agency responsibility originates in Public Resources Code section 21081.6(a)(1) (Findings), and the State CEQA Guidelines section 15091(d) "Findings" and section 15097 "Mitigation Monitoring or Reporting."

### **2.6.1 Monitoring Authority**

The purpose of a Mitigation Monitoring Program (MMP) is to ensure that measures adopted to mitigate or avoid significant impacts are implemented. A MMP can be a working guide to facilitate not only the implementation of mitigation measures by the project proponent, but also the monitoring, compliance, and reporting activities of the CSLC and any monitors it may designate.

The CSLC may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as deemed necessary, and some monitoring responsibilities may be assumed by responsible agencies, such as the California Department of Fish and Game Office of Spill Prevention and Response. The number of monitors assigned to the Project will depend on the number of concurrent mitigation measure requirements. The CSLC or its designee(s), however, will ensure that each person delegated any duties or responsibilities is qualified to monitor compliance.



Any mitigation measure study or plan that requires the approval of the CSLC must allow at least 60 days for adequate review time. Other agencies and jurisdictions may require additional review time. It is the responsibility of the environmental monitor assigned to each area to ensure that appropriate agency reviews and approvals are obtained.

The CSLC or its designee will also ensure that any deviation from the procedures identified under the monitoring program is approved by the CSLC. Any deviation and its correction shall be reported immediately to the CSLC or its designee by the environmental monitor assigned to the Project.

Section 6.0, Mitigation Monitoring Program, of this EIR includes mitigation monitoring tables for the Project. Each table identifies the impact, mitigation measure, monitoring reporting action, effectiveness criteria, responsible agency, and timing.

#### **2.6.2 Applicant's Responsibility**

Prior to Project commencement, the Applicant will also be required to address the following issues:

- Specify how the Applicant will incorporate mitigation requirements into the contract bid documents, project-related contracts, and drawings, if any, so that the mitigation required is clear to the project-related employees and inspection personnel for the 10-year life of the Project;
- Specify the number of environmental inspectors (EIs) assigned at each project phase/location, what authority is given to the EIs, and provide a description of how the Applicant will ensure that sufficient personnel are available to implement the environmental mitigation;
- Specify what monitoring reports shall be submitted to the applicable jurisdictions and the frequency of such reports;
- Specify the training and instructions the Applicant will give to all project-related personnel in regards to implementation of the mitigation measures, understanding the EIs' authority, and other conditions; and
- Specify how the training records will be kept, methods of verification that training was received by all applicable personnel before project work commenced, and how refresher training will be assigned.

## 2.7 FUTURE PLANS AND ABANDONMENT

Venoco submitted a Development Plan Application for Ellwood Oil Pipeline Installation and Field Improvements to the CSLC, Santa Barbara County, and the city of Goleta to allow for expanded development of the South Ellwood Field from Platform Holly, which lies in State waters offshore Goleta in Santa Barbara County (Venoco 2005c). The project would include:

- Construction of a new 10-inch (25-cm) diameter, 10-mile (16-km) onshore pipeline to transport oil from the Ellwood Onshore Facility (EOF) to the Plains All American Pipeline system at Las Flores Canyon;
- Decommissioning and abandonment of the EMT and Line 96. Restoration of the EMT site and discontinuation of marine transportation via barge;
- Adjustment of the existing PRC 3242.1 lease boundary to encompass the eastward section of the South Ellwood Field;
- Drilling of up to 40 new wells on both the existing leases and the proposed project area;
- Replacement of the existing crane on Platform Holly;
- Replacement of the existing 2-inch (5-cm) utility pipeline and subsea power cable between the EOF and Platform Holly; and
- Various improvements at the EOF, including a new power generation plant.

As part of the application, Venoco would abandon the EMT and restore the onshore and offshore lease. The application was submitted in August 2005 and deemed incomplete; Venoco is currently addressing the comments.

Venoco has not proposed to abandon the EMT as part of this Project; therefore, environmental impacts associated with the abandonment of the EMT have not been evaluated in this EIR. However, Section 3.0, Alternatives, provides an overview of EMT abandonment procedures as proposed by Venoco in their application for the Ellwood Oil Pipeline Installation and Field Improvements.

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